

PRELIMINARY AND SHORT REPORTS

PRANTAL IN THE TREATMENT OF HYPERHIDROSIS

LAWRENCE M. NELSON, M.D.*

Various drugs have been used in the past in attempting to control hyperhidrosis. However, until Banthine was used successfully for this purpose by Grimson, et al (1), no single drug seemed entirely capable of controlling the condition. Although Banthine has, apparently, been quite satisfactory (2, 3, 4, 6), undesirable side reactions have been noted; among these are dryness of the mouth, slight blurring of vision and dilatation of the pupils, constipation, decreased force of the urinary stream, and, rarely, in patients with prostatic hypertrophy, urinary retention (5, 6). Therefore, a drug which would check hyperhidrosis with fewer side effects would be desirable. Prantal,† a quaternary amine (N,N-dimethyl-4-pyridylidene-1,1-diphenylmethane methylsulfate) has proved in experimental animals to have a parasympathetic blocking effect equal to or superior to Banthine without producing mydriasis (7). Because of the parasympathetic blocking effect, it was felt that the drug might be useful in the treatment of hyperhidrosis. In the present series, the drug was given in the dosage of 50 mg. four times a day unless otherwise stated.

Two patients with severe hyperhidrosis of the hands and feet were given the drug. The condition was completely controlled in one; the other received no relief, even though the dosage was increased to 100 mg. four times a day. A like amount of Banthine did not control the hyperhidrosis. A third patient who had severe hyperhidrosis of the hands and feet, for which sympathectomy was done in 1948, was given the drug when he developed a relapse of one hand. Prantal, 100 mg. four times a day, was ineffective; Banthine, 50 mg. four times a day, afforded relief.

Two patients with moderate hyperhidrosis of the feet only were treated; one, previously partially controlled by Banthine, was controlled by Prantal; the other received little or no help.

In two patients with symmetric lividity of the soles, the hyperhidrosis was not influenced. Three patients with axillary hyperhidrosis were treated; two had satisfactory control of the hyperhidrosis, but it was necessary to raise the daily dose to 300 mg. in one case and 400 mg. in the other to control the condition; the third patient was not helped by 100 mg. four times a day. Subsequently, Banthine, 50 mg. four times a day, controlled the hyperhidrosis but caused marked dryness of the mouth.

Four patients in whom excessive perspiration seemed to retard the healing of a concomitant dermatitis (contact dermatitis in two patients, neurodermatitis in one, dermatitis medicamentosa in one) were greatly helped and the involution of the dermatitis speeded by the use of Prantal. One patient had previously been helped by Banthine. One patient with lichen simplex chronicus was not helped by either Prantal or Banthine, 400 mg. daily.

In this small series, there were no unfavorable reactions to Prantal aside from headache complained of by one patient. The headache could be reproduced at will by administering the drug.

Summary: Fifteen patients with hyperhidrosis were treated with Prantal. Eight had satisfactory control of the hyperhidrosis. Two patients, whose hyperhidrosis was not controlled by Prantal, were subsequently given Banthine without effect. One patient, whose hyperhidrosis had previously been controlled by Banthine was subsequently controlled by Prantal. Banthine controlled the hyperhidrosis of two patients when Prantal

Received for publication, June 28, 1951.

* 30 West Arrellaga Street, Santa Barbara, California.

† Supplied by George Babcock, Jr., M.D., Division of Clinical Research, Schering Corporation.

was ineffective. The hyperhidrosis of another patient, partially controlled by Banthine was completely controlled by Prantal. The only reaction noted to Prantal was headache in one case.

Conclusions: Prantal is effective in the control of some cases of hyperhidrosis. Neither Prantal nor Banthine are consistently effective in this respect.

REFERENCES

1. GRIMSON, KEITH S., LYONS, C. KEITH, WATKINS, WM. T., AND CALLAWAY, J. LAMAR: Successful treatment of hyperhidrosis using banthine, J. A. M. A. **143**: 1331, 1950.
2. Hyperhidrosis, queries and minor notes, J. A. M. A. **143**: 858, 1950.
3. Hyperhidrosis in a paraplegic, *ibid* **145**: 275, 1951.
4. Arterial occlusion and hyperhidrosis, *ibid* **145**: 1025, 1951.
5. LONGINO, F. H., GRIMSON, K. S., CHITTUM, J. R., AND METCALF, B. H.: Orally effective quaternary amine, banthine, capable of reducing gastric motility and secretions, Gastroenterology **14**: 301, 1950.
6. GRIMSON, KEITH S.: Cholinergic and anticholinergic drugs and their trial in treatment of gastrointestinal disorders, New York State J. Med. **50**: 2028, 1950.
7. MARGOLIN, S., BELOFF, G., DOYLE, M., GIBLIN, J., MAKOVSKY, A., SPOERLEIN, M. T., STEPHENS, I. AND TISLOW, R.: Pharmacological properties of a new parasymphathetic blocking agent. *To be published.*